

## **Industrial Policy 2016 of Bangladesh: An Assessment from the Green Perspective**

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### **Abstract**

Green growth, green energy, and green industrialization have been moved to the forefront of economic development in the present crux of environmental degradation and climate change. Nowadays, different policies are having green features. Literarily, the green policy generally denotes the environmental policy, but other policies related to the environment may also be green focusing on environmental issues. And his industrial policy deserves a great attention of the policymakers in this regard. The Government of Bangladesh (GoB) has formulated Industrial Policy 2016 which has been embedded with several targets conducive to green growth and sustainable development goals (SDGs). As it is not a declared green industrial policy, the question has been raised here and attempts to scrutinize that to what extent or whether this policy can promote green industries in the obvious socioeconomic condition of Bangladesh. This article has maneuvered to evaluate this policy through content analysis and found this policy as an elementary initiative for green industries in Bangladesh.

**Keywords:** Industrialization, market, sustainable development, environment, a green policy, innovation.

### **Introduction**

Industrialization is necessary for development but unplanned industrialization degrades both the environment and overall development shortly (Khanam, 2017). Emission of greenhouse gases and the industrial byproducts are now the headache of the environmentalists as well as the policymakers. Bangladesh is a densely populated country. Though agriculture is the leading sector of its economy, it cannot accommodate a large number of populations for their livelihood and development. In the 1980s, the Government of Bangladesh (GoB) formulated its first Industrial Policy to foster industrialization while the eighth industrial policy is now under implementation. Moreover, Bangladesh has been following many development strategies from donor agencies since its inception to spur economic and infrastructural development. Prior to the alleviation of poverty at a minimum level, economic development was the main target of the previous policies, and the environmental impact was not an important issue of those policies. Different donor-based strategic programs like Structural Adjustment Program (SAP), Poverty Reduction Strategy Papers (PRSP), Millennium Development Goals (MDG) also emphasized development rather than environmental impact (Nasreen et al, 2006). However the poverty has been reduced globally, the current systems of production and consumption

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are escalating the risks connected to rapid resource depletion, degradation of ecosystems, and the threat to climate change with potentially irreversible consequences (Stamm et al, 2009). Consequently, developing and underdeveloped countries have adopted SDGs which simultaneously focus on environment and development. To achieve these goals, GoB has incorporated several tools and mechanism for green industrialization in the recent industrial policy which includes sustainable and inclusive industrial growth through generation of productive employment to create new entrepreneurs, mainstreaming women in the industrialization process and international market linkage (Bangladesh Economic Review, 2017).

This study primarily aims to evaluate the green aspects of this industrial policy while the critical analysis also reveals the effects, capacity, and strategies engaged to achieve the targets of this policy. Thus, the main unit of analysis of this study is the industrial policy 2016. But the documents analysis also explores other relevant government policies, different international guidelines for green industries, protocols, actions plans etc. To this end, different reviews, strategic papers, research articles, and assessment studies have been examined to ascertain the green aspects of this policy.

The paper is structured as follows with an introduction in the above part. Part two highlights the concept and characteristics of green industrialization while part three briefly reviews the objectives, goals, and strategies of the policy to determine the nature of the policy. Section four critically assesses the green aspects of the policy and challenges to sustainable development through industrialization. The article concludes in the fifth section with few recommendations for more initiatives for green industrialization.

### **Conceptual framework**

The traditional industrial policy mainly emphasizes targeted government intervention in trade, tariffs, import licensing, quotas, credit concession, loan facilities, etc (Schwarzer, 2013). It used to engage mechanism and stimulation to increase the productivity for maximum returns from capital and labor (Altenburg and Assman, 2017). But government intervention, market monopolies could not even save the market from failure and financial crisis in the past. The U.S. government, the European Commission and the OECD have advocated reindustrialization and industry-oriented 'integrated' policies, since at least the recent financial crisis (European Commission, 2010). The industrialized countries also have been redefining the industrialization emphasizing decoupling economic growth which requires environment friendliness of the industrial policy and green industry (Azar et al, 002). In recent years, the green industry has found its way into globally negotiated commitments and economic development (UNCSD, 2012). The policy researchers, as well as the international organizations, are also advocating green policies, especially in industrialization. It is a combination of industrial and environmental policy mechanism, which sets up the objectives of restructuring the industries as green and tools of non-neutral policies (Stephane et al, 2013). A green industrial policy has several more distinctive features than the traditional industrial policy. The six of such important features are as follows: 1. the focus on environmental

externalities, 2. identifying the 'good' and 'bad' technologies according to their environmental impacts, 3. achieving structural changes within a short period of time to prevent the risk of catastrophic environmental changes, 4. preparedness for uncertainties due to longtime horizons of some transformations as well as dependence on policy changes, 5. additional policy interfaces and policy coordination and 6. a stimulation to manage global commons, for long-term sustainability, which may not always comply with immediate national interests (Altenburg and Pegels, 2012; Lütkenhorst et al, 2014). In essence, the green industrial policy supports the transition of an economic structure with a balance between environmental sustainability and economic growth in the global commons by applying knowledge-based technology. It incorporates comprehensive strategies of investment, research, trade, and financial issues in the uncertainties of innovative technology for the holistic purpose of the society at large. Nowadays most of the industrial policies, irrespective of green or traditional policy hold several strategies for green industrialization which can be sorted out by studying the policy thoroughly.

### **An Overview of Industrial Policy 2016**

Rapid industrialization has been taking place in Bangladesh since the 1990s through many pro-industrial initiatives especially in the period from 2000 to 2012 (Sarkar, 2005). But continuous environmental degradation and contemporary global development strategies motivate the GoB to redefine the industrial policy 2010 and to make a new one in 2016. The new industrial policy has sixteen chapters with more than 170 clauses. The chapters such as aims and objectives, investment incentives, establishment of industrial park, productivity and standard of products, creation of intellectual property, foreign investment, industrial technology, eco-friendly industrial management and skill development reveal the nature of the policy and entail the main tools of industrial policy- (1) subsidies in their many forms—from production subsidy to lower interest rates; protection from imports; (2) direct public participation; (3) public procurement rules (e.g., “domestic sourcing” requirements); (4) targeted public investments, for example in infrastructure; and (5) cluster policies and other forms of innovation policies (Stephane et al, 2013). Three objectives of this policy are— (1) to improve the socio-economic condition of the people by achieving industrial growth and creating employment through industrialization from public and private initiatives, (2) increasing the contribution of industrial sector and labour forces from 29% to 35% and 18% to 25% respectively to the national income, and (3) achieving inclusive growth through standard industrialization and income centric employment (Ministry of Industry [MOI], 2016).

The aforementioned three objectives do not speak about the environment directly, but the overall tools and strategies have a focus on environment-friendly industrialization. But in the post-Rio+20's, developing countries have an obligation to formulate industrial policy according to the new agenda of the conference that is the special protection of the environment. In this perspective, the Ministry of Finance demonstrates the objectives of

Industrial Policy 2016 that it has incorporated the targets of sustainable and inclusive industrial growth (Bangladesh Economic Review, 2017). National Environmental Policy also echoes in the same direction about industrialization in Bangladesh. It aims “to encourage and to assist in ensuring sustainable environment-friendly industrialization as well as to improve the specialized industry by maximum utilization of local agricultural, forestry, livestock, natural and ocean resources”(Ministry of Environment and Forest [MOEF], 2013). To this end, it requires a review to identify the green aspects of this industrial policy.

### **Action plans of the Industrial Policy**

Action plans focus on the way out to achieve the goal or target of any policy through specific strategies. The goal of this Industrial Policy is to obtain maximum industrialization, but the question remains on the process and tools. To achieve sustainable development goals, a country's industrial policy must have to follow an environment-friendly process for the desired economic growth. Action plans (sub-sections 2.5) of the Industrial Policy 2016 are as follows:

- Implementation of time-bound work plans to create dynamic, skilled manpower in the industrial sector.
- To set up productive, export-oriented and priority based industry in backward areas.
- Strengthening export-oriented organization and increasing accreditation capacity of laboratories for diversification and marketing of exportable products.
- Appropriate exercise of information technology to develop and to increase the capability of the industrial sector.
- Upgrading the law, rules-regulations to eradicate hassles in public offices in achieving the credibility of the national and foreign investor.
- Active participation of ministries regarding in bilateral, regional and multilateral investment and trade agreement.
- Providing financial facilities for more participation of woman entrepreneurs in the industrial sector.
- Identification and effective coordination of private and public sectors' partnership regarding native industrialization.

The above action plans are set to fulfill all of the ten purposes of the policy along with the two pro-green industrialization purposes - motivation for environment-friendly industries and enabling the industries according to the global markets (clause 2.4).

### **Incentives for Investment and Foreign Investment**

The traditional industrial policy reserves the government's control on every issue like investment, tax, tariff, import licensing, bank loan, installation. The strategic industrial policy acts just as a coordinator and monitor. It coordinates the national-international links, public-private relations and provides incentives on its vision. Nowadays industrial policies irrespective of green or traditional assure special advantages for green industrialization or the eco-friendly industries using renewable energy and large industrial

entrepreneurs get case to case basis incentives and facilities regarding the amount of investment, opportunities for employment, application of environment friendly innovative technology, technology transfer and perspective to increase the capacity of the economy. Investment related several decisions of the Industrial Policy 2016 are

- Direct foreign investment for green and hi-tech, innovative, skill and technology transferable industries will be encouraged (Clause 12.1).
- Domestic and industrial wastage, solar energy and renewable energy based power generation, windmill, biomass will get priority in foreign and NRB (Non-Resident Bangladeshi) investment (Clause 12.15)
- Public-Private and foreign joint investment to invent environment-friendly technology and to transfer it will get preference (Clause 12.17).

It is not a said green industrial policy, but there are few tools of green industrial policy which can support low-emission energy supply (including renewable energy, bio-fuels and nuclear); energy efficiency (in energy supply and energy-consuming sectors); and carbon capture and sequestration (including deforestation and agriculture) through public and private investment.

#### **Economic Zone, Industrial park and Industry through Public and Private Partnership**

Industrialization in a densely populated country like Bangladesh is very challenging because unplanned industrialization can be more hazardous for mass people than in any other countries. According to this policy; there are some plans to set up economic zones, industrial parks, cluster-based industries, hi-tech parks and industrialization through the public-private partnership. Allocation of land for industries in Bangladesh is always an important issue while it has been directed to settle necessary land through Land Bank comprised with *Khas* and *Char* land for public-private partnership. Environment-friendly monotype industries will also be set up in *khas* areas (clause 6.1).

It is notable that this industrial policy tends to expand industrialization without occupying agricultural land compared to previous policy. In addition, the industry will be installed preferably in the *char* area or by replacing old public industries. The government has already declared to set up a hundred economic zones throughout the country. The negative impacts on ecosystem can be minimized by maintaining with innovative technology, efficient energy, and modern waste management system of green industrialization.

#### **Productivity and Standardization of Products**

Underdeveloped and developing countries primarily attempt to increase productivity ignoring the environmental externalities. This policy advocates for Green Productivity by increasing the capacity of both the labor and resources through the assistance of National Productivity Organization (NPO). In addition, Bangladesh Accreditation Board, Bangladesh Standard

Testing Institute and National Standard (Product & Intellect) Policy are working to upgrade the standard and compliance of the products and industries. It is difficult for a poverty-ridden country to pay attention to green production due to its traditional technology and amateur labor class. But this policy targets a visionary initiative to apply some mechanism for green productivity at least on a limited scale in the newly installed industries.

### **Export-Oriented and Export-Linkage Industry**

The governments of the developing countries want to spur the export for high economic growth rather than the green growth because green industries require more sophisticated and innovative technologies as well as skilled manpower which increase the price of the finished products. Consequently, these industries have to face challenges of losing their market in global competition. International buyers are also interested to purchase products from compliance factory. The export-oriented industry has already a pressure from buyers and as well as from local people to follow green policy and green production. Bangladesh can shift its largest RMG industries (Ready Made Garments) to green as it produces only finished products from imported materials, not produces any raw materials. Industrial policy 2016 fixes on the following points:

- Priority to export-oriented industries for sustainable economic development (clause 11.1).
- Rescheduling the prices of products by applying green technology like jute products and jute mixed products (clause 11.4).
- Pledge to take necessary initiatives to make competitive pricing of the products in the global market produced from by using environment-friendly technology and to maintain the standard (clause 11.8).

### **Industrial Technology**

Industrial technology is one of the prerequisites of rapid and sustainable industrialization. Production in developing countries is mostly labor-intensive rather than technology oriented. However, innovative and energy efficient technology is replacing labor-intensive factories day by day in Bangladesh. It is not only a matter of transformation but also a conjecture of market, investment, and innovative capacity. This policy: proposes for competitive and cost-effective technologies to improve the capacity and environment friendliness of Bangladeshi industries (clause 13.1).

- offers scope to create knowledge-based hi-tech industrial skilled workers and encourages for studying on appropriate industrial technology at universities and vocational institutions (clause 13.2).
- rebates taxes for research and development (R & D) in industrialization (clause 13.3).
- recognizes for environment-friendly, sustainable and innovative technology inventors in improving products through the articulation of new technologies in the industry (clause 13.6).
- forms a group or groups to produce world standard commodity for local and international market align with the skilled professionals or experts in appropriate technology and the experienced entrepreneurs.

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Innovative technology is inevitable for eco-friendly industries which encompass technologies to produce the quality product with less carbon emission and less pressure on the environment. However, industrial policy normatively aims for resources efficient technologies to make cost-effective rather than innovative one (Lutkenhorst et al, 2014). The aforesaid initiatives can help to stimulate the green industries in Bangladesh.

### **Eco-friendly Industrial Management**

Generally, green industries follow proper management and monitoring system clearly mentioned in the policy itself. It may square up to problems like lack of skilled manpower, appropriate technologies to monitor environmental compliance in the developing countries' perspective. The GoB has taken some steps through this industrial policy, which seem manageable in the present context. They are:

- Impact of an industrial project will be assessed before the allocation of land and water (clause 14.1).
- It will motivate to install ETP, CETP to prevent environmental pollution from industries. The government will ensure the enforcement of Environment Protection Act-1995, Bangladesh Water Act-2013 and all other relevant laws (clause 14.2).
- The government will provide necessary assistance to apply Clean Development Management (CDM) for industries to control GHG mitigating climate change impacts (clause 14.3).
- Industries will get preference on the basis of their capacity for disaster risk and its surrounding. Environmental pollution-free or climate change-resistant industries will get incentives (clause 14.4).
- Local and foreign entrepreneurs will be encouraged to set up waste management industries while the government will also provide necessary assistance along with financial incentives (clause 14.5).
- Business organizations, NGOs and other social organizations will be encouraged to take part actively in industrial waste management and environmental protection activities (clause 14.6).
- Green industry and climate change mitigation efficient industries will be promoted (clause 14.7).
- It will discourage the setting up of industries in the intensive and high yielding cultivable land (clause 14.8).
- An investor will be encouraged to take an eco-friendly large project through public-private partnership (clause 14.9).
- The industrial entrepreneurs will be encouraged to follow 3R (Reduce, Reuse and Recycle) strategy in the installation and maintenance of the industries (clause 14.10).

This section of the policy manifests the best directions for green industrialization in Bangladesh, and the plans comply with its existing Environmental Policy.

### **Favours green industry or not?**

Notwithstanding, the Industrial Policy 2016 is not an announced green industrial policy. It holds a few green growth features compared to the policy



taken in 2010. While Bangladesh is thrust for economic growth, it is difficult to maintain optimum environmental issues properly. The industrial sector has been showing an exponential growth for the last couple of years (Sarkar et al, 2017). The existing industrialization is degrading the environment every day, posing an enormous threat to habitat, ecosystem and natural livelihood in Bangladesh. And there is little chance to establish green industry through this industrial policy because it lacks proper directions for mechanism and system to achieve the targets. Enforcement is a constant problem in the country like Bangladesh. Industries may be reluctant to undertake green R&D or to adopt green technologies because they are uncertain and whether the future policy will render these kinds of investment profitable is unknown (Karp & Stevenson, 2012). In addition, the details of R &D are not demonstrated in this policy.

Generally, industrial policy is updated for correction of a market failure to adjust to the market through incentives in the private sector or any other type of government intervention. But the industrial Policy 2016 does not speak about market management, a mechanism for compliance maintenance of the industries or the price determination in the global commons. It may be possible through the trading policy of a country, but in the flow of globalization, policy integration is a fact (Stiglitz, 2017). This policy does not call for the derivation of knowledge from basic and applied sciences. It is a good guideline without proper execution techniques as it does not commensurate with Environment Policy and Trade Policy - specifically Protective Tariffs in case of import substitute industries. In that sense, it cannot be said a comprehensive policy which can be implemented in a balanced way.

Regard to the environmental issue, this industrial policy has less scope to maintain green perspective because there are no clear-cut actions plan and strategies to work with the environment departments of the government. It envisages to set up new economic zones for more industrialization whereas there are no directions about the already existing industries scattered in residential areas or replacement of old machinery and technologies through transferring of innovative technologies. Moreover, it calls for management and reformation of public industries but suggests no specific mechanism to regulate thousands of private industries toward sustainable growth. Thus, Bangladesh will face some obvious challenges both within and global issues about industrialization in the days to come.

The developed countries are mainly responsible for climate change activities, but they are reluctant to implement a green industrial policy to reduce the emission of GHGs. In this regard, Bangladesh is not legally obliged to adopt such policies. Developing countries aims to alleviate poverty through economic growth rather than green growth. But it is now proven that environmental degradation is more price-worthy than growth which is more than 3% in Syria, Lebanon, Algeria, Morocco during the various years, 8% of GDP in Iran in 2002 (Croitoru & Sarraf, 2010). So, the United Nations emphasizes Sustainable Development Goals (SDGs) as well as green policy efforts. The green industrial policy leaves some unavoidable challenges irrespective of geography and nature of the economy. German Development Institute identifies four challenges in general. These are - responding to

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pervasive market failures, addressing high uncertainty and long-time horizons, creating new pathways and disrupting old pathways (Lutkenhorst et al., 2014)

Pervasive market failures assume that there will be problems in price adjustment in the export market and difficult to acclimatize in the industrial trade primarily. But Bangladesh is quite obliged to do that because buyers put pressure to go for the green industry. They are imposing different conditions to meet up compliances and green production. The RMG sector in Bangladesh is facing high competition from Vietnam, Indonesia, Pakistan, and India. Among the many issues, compliance is one of the important facts to help to decide for buyers whether they will purchase RMG from Bangladesh or not. In fact, it will be daunting for Bangladesh to ensure compliance in the factories without relocating them because there is little scope to set up central effluent treatment plant (CETP) for factories in the existing condition. On the other hand, relocation is not only a matter of new investment but also a matter of available land in such a densely populated small country.

Another challenge is the high level of uncertainty like commercial applicability of new transformative technologies and unknown technical feasibilities before the full production of industry. The green industrial policy creates new pathways for sustainable development which requires experimentation and discovery of technologies adaptable of a country's perspective. Though the industrial policy is updated to make the policy more environment-friendly with integrated rules-regulations through an institutional framework, the policy discussed remains weak in the issue to address.

### **Conclusion**

Given the above discussion about the aims, objectives, action plans and different strategies about the industrial policy in Bangladesh, the move for a new industrial policy is clearly a step ahead to achieve sustainable development goals. However, it depends on the degree of implementation in regard to its great politico-economic impact on society. The Industrial Policy 2016 of Bangladesh is a traditional policy indeed with several added initiatives which can combat the environment pollution at least a bit. Thus, it is not an issue to reduce greenhouse gases (GHG) or maintain environmental externalities but to manage the global markets to some extent by fulfilling some of their requirements. Unplanned and traditional industrialization is still going on in nook and corner of the country, which is posing a multifaceted threat to the environment and public health, resultantly affecting the mass people adversely. This policy has fixed the action plans to obtain several targets within a short period of time by 2021. It can confirm the markets and business for temporarily but cannot bring forth long-term benefit for mass people.

Bangladesh has been improving steadily in several grounds of green industrialization like the generation and use of green energy, an obligation of setting up of ETP and the maintenance of compliance of in the RMG sectors. This industrial policy has incorporated many clauses, strategies

inevitable for green industry, which can stimulate the environment-friendly industrialization. The policy for the green industry has not only been prioritizing for environmental and climate change issues but also for creating a basis for future benefits, not (primarily at least) to achieve short-run goals (Karp & Stevenson, 2012). The economy of Bangladesh has been transformed into the industrial economy to a great extent from agro-economy, which has been achieving a steady and high economic growth as well for decades by damaging the price-worthy environment recklessly. It may cause an environmental disaster in the coming days. To this end, it is high time for Bangladesh to go for a green industrial policy because the intended beneficiary of the industrial policy is neither bureaucrats nor business, but society at large (Rodrik, 2014). The green industrial policy envisages long-term strategies for sustainable industrialization and integration of multi-dimensional knowledge for green industrialization and overall benefits.

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